Network-building behavioral tendencies, range, and promotion speed

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\textbf{A B S T R A C T}

We studied 459 Ukrainian civil servants to determine how career network-building behavioral tendencies relate to network range and promotion speed. We identify two main behavioral tendencies for initiating social relationships: (a) networking within formal structured groups organized around activities created specifically to encourage members to form personal bonds (structured foci) and (b) individually driven networking outside these structured foci. The study shows that individually driven networking is related to broader network range, while structured foci networking has an inverted-U relationship to network range. The optimal networking for range involves a moderate level of structural foci networking and high levels of individually driven networking. Broad network range is related to faster promotion speed to higher organizational levels. Extroverts have a tendency toward individually driven networking, while high Machiavellians have a tendency toward both individually driven and structured foci networking.

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Social network researchers argue that individuals’ human capital only partly determines their career outcomes and that social capital, as reflected in networks of social relationships, can speed promotions within organizational hierarchies (e.g., Burt, 1992; Brass, 1985). One major research tradition, the networks-as-resources perspective, examines how social networks enhance career success, such as through faster promotions (e.g., Ibarra, 1995; Campbell et al., 1986; Granovetter, 1973). Rather than focus on the content that flows through social ties (e.g., friendship, advice), this perspective focuses on the structure of individuals’ ties, specifically their personal network range. Range has been conceptualized in three ways (Campbell et al., 1986): personal network density, or the extent to which one’s ties are themselves connected (e.g., Burt, 1992); size, or the individual’s total number of ties; and tie diversity or heterogeneity (e.g., Seibert et al., 2001). According to the networks-as-resources perspective, individuals who have broader range can learn more non-redundant information from diverse groups than can others lacking that access in the organization. Organizations will value most those few employees who have access to diverse information because they potentially understand organizational goals more broadly and may create unique solutions to organizational problems (Burt, 2004). We adopt the approach of conceptualizing personal network range in the most direct fashion - individual’s heterogeneity of ties to diverse information clusters outside their focal group (Campbell et al., 1986; Seibert et al., 2001).

The main information clusters in an intra-organizational context are the units created by the formal organization structure, and range in this context refers to ties crossing these formal unit boundaries (e.g., Oh et al., 2004; Thompson, 1967). Such boundaries demarcate pools of knowledge necessary for the successful functioning of an organization as a whole, but which are separated due to specialization (Burt, 1997; Ibarra, 1995; Tushman and Scanlan, 1981). This separation creates an organizational need for integration, and individuals with broad network range are positioned to satisfy that need and to reap rewards in the form of faster promotions. Because any tie that crosses formal boundaries helps organizations to integrate knowledge and enhances employees’ value, it is particularly relevant to examine the heterogeneity of individuals’ contacts to understand how range affects career-related rewards.

What behavioral tendencies lead individuals to become embedded in diverse networks that are broad in range? What are the psychological determinants of these behaviors? The networks-as-resources perspective, although important to organizational research, lacks detail in describing the process individuals use to develop their network structure. Rather, the perspective creates prescriptions, such as suggesting that individuals should develop

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networks with broad range, without suggesting how to do it or who is more likely to engage in the behaviors that maximize range. Our study contributes to the networks-as-resources perspective by elaborating existing theory, increasing understanding of the social contexts in which individuals meet others, and offering a more comprehensive understanding of both network-building behavioral tendencies that maximize range and their psychological determinants.

We argue that individuals exhibit two main approaches when building network ties: meeting people through joint involvement in structured formal groups or associations organized specifically to encourage meeting others and developing norms of mutual obligation and reciprocity; or meeting network partners through individually oriented activities that are not driven by formal group membership, such as going to a friend’s party and developing a relationship with someone met there by chance. Our main contribution will be to illustrate that individuals’ tendencies to build network ties through either or both of these different approaches are related to differences in individuals’ range in the workplace. Specifically, we use the theory of social organization (Feld, 1981) and group homophily theory (McPherson and Smith-Lovin, 1987) to argue that individuals’ tendency to meet people through an individually driven approach increases personal network range in the workplace. We also argue that the tendency to meet people through membership in formal groups and other structured foci has a negative curvilinear effect on individuals’ network range at work, with those engaging in an above average amount of networking in structured contexts suffering dramatically lower range. We suggest that there is an optimal combination of networking behaviors that maximizes range: moderate amounts of structured foci networking and high amounts of individually driven networking. This optimal combination leads to the fastest promotion speed to higher organizational levels. Finally, we show that these networking behaviors are tied to psychological characteristics rooted in personality, such as extroversion and Machiavellianism.

1. Theory development

1.1. Range and promotions

Network range is important because it is a major determinant of a critical career outcome: promotion speed (Seibert et al., 2001). Organizations divide labor into production specializations, so that individuals and organizational units focus on their most immediate tasks and exclude related tasks, which are then assumed by other individuals and units (Burt, 1992). This tendency toward unit specialization is particularly acute in large private and public bureaucratic organizations (Tushman, 1977; Tushman and Scanlan, 1981). Individuals in specialized units tend to lose track of what their colleagues in other units are doing, even though such knowledge can benefit the organization as a whole (March and Simon, 1958; Mors et al., 2005).

Employees with ties to numerous formal units outside their focal unit have networks with high range. Occupying boundary-spanning positions between formal units allows them to derive more personal benefits relative to their human capital, compared with others outside such positions. For example, boundary spanners can take ideas from other units and apply them to their own units, so that supervisors will see them as being more technically competent than their peers (Tushman and Scanlan, 1981; Tushman, 1977). Moreover, boundary spanners are thought to have the most innovative ideas (Burt, 2004) and can control resource flows between formal units in their organizations (Burt, 1997).

Studies that have directly measured personal network range as formal group tie diversity have generally found that it relates positively to individuals’ career outcomes. In a study of a contract research and development firm, Reagans and McEvily (2003) demonstrate that individuals with wide range can ease the transfer of information between units, which ultimately makes them more valuable because they are the integrative glue that keeps the organization learning and growing. Furthermore, Ibarra (1995) suggests that being connected to diverse groups allows individuals to hear about opportunities for advancement more quickly. She also finds that wide-ranging networks give individuals broad-based political support throughout the organization. Finally, Seibert et al. (2001) indicate that employees who have contacts with different functional units are better able to acquire needed resources from disparate parts of the organization; consequently, they are likely to be rewarded with faster promotion and experience greater career satisfaction.

Related studies that did not measure network range as formal group tie diversity, but rather examined how people benefit from having ties that span informal groups within organizations, also suggest a positive relationship between inter-group spanning and career outcomes. For example, Mehra et al. (2001) find that employees positioned between informal groups in a high-technology firm receive high supervisory performance evaluations. Brass (1985) finds that non-supervisory employees who span informal groups in their work units achieve not only high supervisory ratings but also fast promotions. Fleming and Waguespack (2007) find that members of an open source development community with ties spanning more working groups emerge as community leaders. Finally, Oh et al. (2004) show that units whose members have ties spanning other units exhibit high task effectiveness, while Tsai and Ghoshal (1998) suggest that those units are more innovative.

Thus, the existing literature suggests that individuals with contacts to many organizational units will be able to access heterogeneous knowledge residing in different organizational silos, will have informed perspectives on what is transpiring elsewhere, will control information flows across units, will enjoy broad political support in the organization, and will ultimately perform more effectively in their jobs. These positive factors will be associated with faster promotions for individuals with higher network range. While Campbell et al. (1986) suggest that range could also be conceptualized as the density of ties between contacts or as personal network size, neither approach is as proximal in capturing the potential resources available to individuals as is examining the spanning of formal inter-unit boundaries.

1.2. The theory of social organization

Although achieving range is important for promotion in the workplace, what factors determine an individual’s range? Feld’s (1981, 1982) theory of social organization is the main sociological perspective attempting to explain the origins of personal network diversity. Central to this theory is the focus—a legal, social, physical, or psychological entity around which joint activities are organized. Feld’s focus concept is extremely inclusive: among the examples he mentions are formal and informal entities such as work organizations, formal and informal voluntary organizations, and kinship entities such as families or clans, physical locations such as “hangouts,” city neighborhoods, or courts in the middle of a housing project, and gatherings such as football games. “Foci may be many different things, including persons, places, social positions, activities, and groups. They may actively bring people together or passively constrain them to interact (Feld, 1981: 1018).”

Feld argues that individuals meet others either by networking in these foci or in more random, chance encounters, and this has a profound effect on the diversity of their personal networks. He proposes that if individuals build ties around a few foci, their personal networks are likely to be very dense, with many of their social ties
also being tied to each other because foci encourage density (Feld, 1981: 1024; 1982: 797). Foci can be more or less constraining, based on the extent to which they obligate individuals to interact regularly and create social ties that demand “time, effort and affect” (e.g., Feld, 1981: 1023). The constraining nature of foci, in combination with individuals lacking an infinite capacity to maintain large and diverse sets of ties, makes their networks denser and more homogeneous. The result of this density and homogeneity should be a network with narrower range, and one that would be less likely to result in fast promotion in one’s career.

One difficulty with Feld’s theory of social organization is that the expansive definition of foci as any legal, social, physical, or psychological entities around which individuals organize their activities makes it difficult to conceive of how individuals would not meet each other within a focus, and it could lead to nearly anything being labeled a focus. As an example, an individual who meets another while walking their dogs could attribute their new tie to that dog-walking focus (a psychological entity) or perhaps to the architect that designed the walking path that enticed them to walk their dogs along the same road (a physical entity). We will, therefore, narrow our investigation to a specific type of foci that are most likely to be network-constraining – “structured foci,” which are ongoing formal entities that actively and regularly bring individuals together to engage in organized joint activities created specifically to encourage members to form personal bonds. By restricting our inquiry to these structured foci, we will be able to understand the extent to which individuals’ tendencies to favor meeting others in these formal entities might encourage personal network density and homogeneity, and whether this is related to workplace range and promotion speed.

We also elaborate Feld’s theory of social organization in another manner. While Feld attempts to explain the relationship between foci networking and its resulting network diversity, he avoids elaborating an alternative to networking through foci. Thus he does not articulate the potential tradeoffs between meeting others that become part of a person’s network within foci versus outside of foci, which is critical when we consider that individuals have limited resources to invest in their social networks. Third, if building ties in foci reduces the diversity of one’s network, how can individuals build relationships to enhance their network diversity? Research shows that individuals’ networks have considerable range variations; some people have many range-diversifying ties while others do not (e.g., Reagans and McEvily, 2003). Moreover, evidence shows that some individuals actively network to enhance their range (Ibarra, 1995: 679; Oh et al., 2004; Vissa, 2012), although the specific nature of these behaviors is unclear from the theory of social organization.

When a theoretical perspective as well-established as the theory of social organization does not have enough clarity to apply to your research agenda, Lee et al. (1999) suggest using inductive fieldwork to elaborate and redirect it,2 and we pursue that approach here. To identify networking behavioral tendencies and consequences, we administered open-ended surveys and interviewed multiple samples of professionals in the United States and in the Ukraine and asked the respondents to provide examples of behaviors that helped them meet people who assisted their careers (see Section 2 for more details on selection, interviews, and processes for analyzing responses).

Our fieldwork allowed us to narrow the definition of foci. When we asked participants how they met people who assisted with their career advancement, many named specific foci, such as “clubs,” “associations,” or “forums”—ongoing formal entities that actively and regularly bring individuals together to engage in organized joint activities and created specifically to encourage members to form personal bonds. To distinguish these examples from the theory of social organization’s general notion of foci, we termed these types of networking behaviors structured foci networking (SFN). We then studied the extent to which professionals had a tendency to engage in these behaviors in additional independent samples, and related this to their workplace network range and career promotion speed.

We found that networking outside of structured foci was critical for individuals to meet people who ultimately helped advance their careers. Many respondents reported they met people by “striking up conversations while traveling,” “inviting people to dinner,” or “going out for drinks.” These alternative non-structured foci networking behaviors involve people using their own initiative to meet others directly, without the intermediation of ongoing structured entities. For example, airline passengers are brought together on a one-time basis; meeting and forming a relationship is incidental to the flight’s purpose. But if two passengers, on their own initiative, engage in direct interpersonal networking during the flight, this type of networking behavioral tendency merits its own label. We call it individually driven networking (IDN).

1.2.1. Structured foci networking (SFN) and range

By narrowing the notion of foci to structured foci, we can extend Feld’s theory on how networking in foci might affect range. Our introduction of SFN and IDN and our recognition that these two types of networking behavioral tendencies might be interdependent and involve tradeoffs means that we must consider the costs involved in meeting people in either type of setting and potential effects on range.

Networking incurs three general types of costs: initiation, maintenance and opportunity costs (Bala and Goyal, 2000; Burt, 1992, 2002). Initiation costs are incurred when individuals search for new partners (Bala and Goyal, 2000; Gargiulo and Benassi, 1999; Portes and Sensenbrenner, 1993). Maintenance costs are incurred when individuals invest time, affect, attention, and other resources to maintain ties (Bala and Goyal, 2000; Burt, 2002: 344; Feld, 1981). Opportunity costs are levied by the extent to which social ties constrain an individual’s ability to form new ties (Burt, 1992; Gargiulo and Benassi, 1999, 2000; Portes and Sensenbrenner, 1993).

An individual’s tendency to SFN will entail lower initiation costs for his or her relationships, whether or not these relationships enhance their network diversity. By joining the focus and attending an organized function, parties signal that they have common interests, are willing to socialize, and perhaps want to initiate a relationship (Feld, 1982). As an example, finding a romantic partner is easier at a dating club than through a random nightclub encounter. The same principle applies in an organizational setting—meeting someone on a cross-unit task force is more likely to lead to a relationship than meeting in the company cafeteria. Common-focus membership also encourages partners to introduce individuals to other focus members (Gargiulo and Benassi, 2000), and this process of transitivity also expands an individual’s network (Feld, 1981) by lowering initiation costs.

However, although SFN lowers the initiation costs of relationships, it increases the maintenance and opportunity costs for range-diversifying ties. Individuals building relationships through SFN will be subject to constraints—behavior norms, expectations, and obligations—the price they must pay for continued group membership (Feld, 1981, 1982; also see Hackman, 1992; Schein, 1965; Portes and Sensenbrenner, 1993 for related discussions). Membership means that the focus will constrain their actions; it will organize and dictate more of their social life and reduce their

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2 Theory elaboration differs from grounded theory development in that it takes an existing theory as its foundation and then uses the insights from the qualitative fieldwork for elaboration and extension (see Zott and Huy, 2007; Maguire et al., 2004; Uzzi, 1996, 1999, for examples of this approach).
scope of activities (Krackhardt, 1999). Foci will also tend to increase cohesion by pressuring members to initiate relationships with other group members, taking their time and attention away from forming ties with outsiders. Finally, foci encourage the maintenance and renewal of intra-group relationships, as well as continued reciprocity among group members, making the ties themselves stronger (Granovetter, 1982; Levin and Cross, 2004), but also creating relational inertia (Gargiulo and Benassi, 2000).

Adherence to such rules, often necessary for maintaining an individual’s focus membership (Baker, 1994), directs the individual’s network formation more internally to the focus (McPherson and Smith-Lovin, 1987).

As an individual engages in SFN, the opportunity costs and maintenance costs for range-diversifying ties increase because the pressures toward homophily among group members tend to be stronger than among people who meet outside of foci (Feld, 1981; McPherson and Smith-Lovin, 1987). McPherson and Smith-Lovin (1987) find that groups introduced stronger homophily across more categories than dyadic homophily not attributable to the group. Although some perceived similarity is likely behind any connection, including one initiated via individually driven networking, the key difference is that IDN efforts are likely to occur in a broad array of contexts. Consequently, when a structured focus is the site of the networking, the actors are likely to be more similar. Group homophily theory identifies four other mechanisms that encourage homogeneity in groups, including homophilius recruitment based on existing members recruiting new members (e.g., Babchuk and Booth, 1969); a desire for low intra-group conflict that biases toward greater homogenous membership (Davis, 1963); inter-group competition for members that forces groups to develop distinctive social niches (McPherson, 1983); and task-based pressures that make some individuals more suitable for membership (McPherson and Smith-Lovin, 1987). Beyond these mechanisms, these groups create rules and obligations that attract certain people and drive other non-conforming members away (cf. Schneider et al., 1995). Groups can also limit the member’s ability to form range-diversifying ties, either through norms that define who is socially unacceptable or because when individuals adhere to intra-group obligations, they lose time and attention that they could otherwise invest in seeking range-diversifying partners. Consequently, as Feld (1982: 797) points out, “social structuring of an activity leads people to develop relationships with others like themselves.” Thus as individuals engage in extensive SFN, it becomes increasingly difficult for them to build other relationships that will diversify their range.

At low levels of SFN, the higher opportunity and maintenance costs of building range-diversifying ties might be hidden. Individuals engaging in minimal SFN behaviors and having networks mainly within their organizational units have relatively low costs for potentially missing out on opportunities to meet partners outside of their units. If the employee is new to an organization, for example, meeting others through a structured focus, such as a company-sponsored softball team, will help develop some range-diversifying relationships. As a result, low levels of SFN will initially be associated with an increase in range. However, as the employee begins to engage in more SFN, each focus will generate pressures of greater constraint and higher overall costs for the individual’s ability to diversify networks—simply because the employee will need more time and attention to maintain membership in multiple groups and satisfy their expectations. The likelihood also increases non-monotonically that the groups’ norms and obligations will conflict. The costs of reducing these conflicts, while still fulfilling the obligations necessary to maintain good standing in each of them, will drain energy and resources (Hackman, 1992; Simmel, 1955; see also Krackhardt, 1999). In response, the individual will attempt to maintain multiple group memberships by relating with partners who are acceptable across the groups—reducing his or her personal network range.

In summary, small amounts of networking in the SFN context are beneficial for increasing range because of minimized initiation costs for establishing new contacts. But as SFN increases beyond low to moderate levels, the individual suffers greater time and attention pressures, more constraints driven by the increasing likeliness of inter-group conflicts, and added homogenizing pressures inside the groups. These constraints increase the opportunity and maintenance costs of range-diversifying ties, resulting in the following relationship:

**Hypothesis 1.** Individuals’ tendency to engage in structured foci networking behaviors will have a negative curvilinear (inverted-U) relationship with their network range.

1.2.2. Individually driven networking (IDN) and range

IDN occurs outside a group’s active intermediation, so IDN and range should show a different relationship. Specifically, IDN should incur higher costs of initiating relationships precisely because such ties are built outside of foci. Without group-based referrals, IDN lacks bounded solidarity and enforced trust (Portes and Sensenbrenner, 1993); people tend to be more wary of initiating new relationships on their own. Moreover, without third parties to encourage tie formation as happens in a group, IDN offers fewer chances of initiating new ties.

However, in contrast to SFN, IDN does not increase maintenance or opportunity costs for range diversifying ties. This happens because individuals are not consistently bound together by recurring organized activity and are less pressured to combine their activities with others. For example, two people from different units meet in the company cafeteria and strike up a long-term relationship. Their relationship will impose fewer pressures to avoid other potential network contacts or expectations that they will help each other’s friends (often called pressures for transitivity), as structured foci impose on members (Gargiulo and Benassi, 2000). With lower pressures for transitivity, individuals engaging in IDN enjoy greater personal freedom and more time to pursue relationships with heterogeneous others. They are not prohibited from turning their attention to initiating range-diversifying relationships with people in different units or departments. Homophily is also likely to drive IDN tie formation, but partners who meet via IDN are likely to differ on more dimensions than are partners who meet via SFN (McPherson and Smith-Lovin, 1987), which also increases the probability that IDN will enhance an individual’s network range. Hence, we propose:

**Hypothesis 2.** Individuals’ tendency to engage in individually driven networking will be positively related to their network range.

1.2.3. Personality traits and tendency to network via SFN and IDN

Individuals are likely to have certain personality-driven propensities and preferences to engage in structured foci and individually driven networking. These personality characteristics might alter their subjective evaluations of the initiation, maintenance, and opportunity costs for SFN and IDN, making them more or less likely to engage in these networking tendencies. The main personality construct dealing with sociability is extraversion. Individuals higher in extraversion are more gregarious, bold, talkative and unrestrained (e.g., Saucier, 1994; Goldberg, 1999). Extroverts are more likely to proactively socialize when searching for jobs (Wanberg and Kammerer-Mueller, 2000) and to socialize and attempt to improve their visibility in the workplace (Forret and Dougherty, 2001). Extroverts tend to seek out and enjoy social interaction and feel more comfortable in social situations than introverts (Lucas and Diener, 2003). Extroverts are not as likely to view tie initiation costs as being as high as more
introverted individuals, who tend toward being shy, bashful, timid, retiring, quiet, and more socially aloof (John and Srivastava, 1999). Extroverts would logically orient themselves toward individually driven networking more than introverts, who would find tie initiation more costly and difficult, irrespective of the relative size of their networks (cf., Dougherty et al., 2008).

**Hypothesis 3.** Individuals’ extroversion will be positively related to their tendency to engage in individually driven networking.

Individuals high in agreeableness tend to show more prosocial and altruistic behaviors, such as higher empathy (Nettle, 2006), greater willingness to cooperate (Denissen and Penke, 2008), kindness and interpersonal warmth (John and Srivastava, 1999) and greater use of integrative conflict-handling strategies (Jensen-Campbell et al., 2003). Agreeable individuals have larger social networks (Klein et al., 2004; Selhout et al., 2010). Theoretical arguments have also been made that agreeable individuals self-select into tight-knit, cohesive groups (Janicik and Larrick, 2005), which might account in part for why groups with more agreeable individuals or with an agreeable leader tend to be more socially cohesive (Barrick et al., 1998; Peterson et al., 2003). We argue that individuals higher in agreeableness are less likely to subjectively perceive the higher maintenance and opportunity costs of networking within structured foci as much of a deterrent, in comparison to those who are lower in agreeableness, owing to a greater affinity for social cohesiveness. Their networking tendency will, therefore, be oriented more toward structured foci networking, which encourages cohesiveness, than those lower in agreeableness.

**Hypothesis 4.** Individuals’ agreeableness will be positively related to their tendency to engage in structured foci networking.

Individuals higher in Machiavellianism are more oriented toward gaining power and to taking a more calculating, manipulative approach toward others (Christie and Geis, 1970; Wilson et al., 1986). High Machiavellians would, therefore, be interested to maximize the instrumentality of their social network, including having more social ties (cf., Clifton et al., 2009), which studied a related dark triad personality construct, narcissism. Indeed, others have argued that those higher in Machiavellianism actively seek out exploitable network positions (Janicik and Larrick, 2005; Brass et al., 1998). If this is true, individuals higher in Machiavellianism should be motivated to bear higher initiation, maintenance, or opportunity networking costs than those lower in Machiavellianism in order to maximize their network’s instrumentality. Thus, we expect to see a positive relationship between Machiavellianism and both individually driven as well as structural foci networking.

**Hypothesis 5.** Individuals’ Machiavellianism will be positively related to their tendency to engage in individually driven and structured foci networking.

2. Methods

2.1. Inductive fieldwork

Because the theory of social organization provides no clear guidance as to which specific behaviors compose foci networking and how individuals build their networks outside of foci, we began with inductive fieldwork to elaborate this theory and to identify the behaviors. We conducted open-ended surveys in the U.S. that identified networking behaviors, then moved to Ukrainian interviews to determine the generalizability of the behaviors internationally, followed by Ukrainian surveys that were analyzed using an inductive exploratory factor analysis. Then we conducted a confirmatory factor analysis using a separate Ukrainian sample. This process allowed us to elaborate Feld’s social organization theory, which was then tested on a set of Ukrainian civil servants. The full process is described in detail below.

We provided open-ended surveys to 51 professionals who were students in an evening MBA program in the United States in Spring, 2005. The participants were 31% female, averaged 30-years-old and eight years of work experience. We asked: “Please list the behaviors that you have engaged in that have led to the growth of your social network (the people with whom you have ongoing relationships that you can call on for information, advice, or support).” Our respondents produced an open-response list that included 75 behaviors that two research assistants combined with others that were similar (e.g., “joining undergraduate alumni association” and “joining graduate alumni association”), resulting in a list of 38 unique behaviors. Subsequent recoding by two new research assistants showed high agreement on the 38 behaviors (Cohen’s Kappa 0.92).

The next stage of our research shifted to the Ukraine, post-Orange Revolution. We used the items generated in the U.S. to inform our interviews of professionals in Ukraine. During these interviews we refined our list of networking behaviors, identified the consequences of the networking behaviors for the diversity of contacts, and found other aspects of social networks to collect in a subsequent survey.

We conducted semi-structured interviews with 20 Ukrainian professionals working in the civil service (average age 37 years, 40% females). At the time of the study, the Ukrainian state bureaucracy comprised approximately 227,000 civil servants. They worked in the following ministries: Economy, Transport, Finance, Communications, Public Health, Prosecutor’s Office, Construction, Police, Tourism, Education, Social Affairs, TV and Radio Broadcast, Judicial Affairs, Defense, State Security, Nature Protection, Science, Tax Authority, Human Rights, Consumer Rights, Border Protection, Self-Governance, Customs, Trade, Arts and Culture, Agriculture, Foreign Affairs, and Family Affairs. Working in the public service was considered prestigious in Ukraine at the time of the study. Individuals wanted to work in the public sector because it provided more job security than in the private sector, although the wages were somewhat lower in the public sector as compared to wages in the private sector.

First, we presented the list of networking behaviors described by the U.S. respondents and asked the Ukrainians to identify their own networking behaviors and to identify behaviors on the list that were atypical in Ukraine. We then eliminated seven behaviors that were viewed as non-Ukrainian methods of relationship building (e.g., “joined a professional networking group in my community,” and “joined a fraternity or a sorority”); no Ukraine-specific behaviors were identified or added, resulting in a 31-item scale. Second, we asked the respondents to comment on how these behaviors would affect the types of people they meet or potentially impose constraints on their subsequent networking.

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3. We will not, however, assume that those high in Machiavellianism will somehow be able to deduce that there is an inverted-U relationship for structural foci networking, and thus will not hypothesize this.

4 Although much of the early research on social networks and career outcomes has been conducted in the United States and the Netherlands (e.g., Boxman et al., 1991; Brass, 1984, 1985; Burt, 1992), research on network resources has generally increased across countries (e.g., Batjargal, 2003, 2007; Bian, 1997; Bian and Ang, 1997; Lazega, 2001; Oh et al., 2004; Völker & Flap, 2001; see Lin, 2001, for a review). The research generally suggests that cultural differences might exist in optimal social networks (e.g., strong ties might be more important in the Chinese cultures), but social network resources are important to career success across all cultures.
Then we asked about general relationships between social networks and career outcomes in Ukraine. Our participants recognized the importance of networking for career success, and they suggested that individuals are promoted in the Ukraine not only because of their knowledge base, but also because they made an effort to build social ties to the “right” people throughout different units of the civil service. In any large public or private bureaucratic organization in Ukraine, unit specialization is high, thus creating great need for integration. Those individuals able to forge social ties that spanned formal boundaries were well-positioned to benefit in terms of career outcomes, according to our interviews.

We then surveyed respondents in the Ukrainian public administration system. Based on insights from the qualitative inductive fieldwork, we created a questionnaire that included (a) an instrument to evaluate government officials’ social networks, (b) a networking behaviors inventory, (c) scales reflecting the respondents’ speed of career progression, and (d) a set of instruments used to capture other individual characteristics, including psychological propensity to engage in networking behaviors, social desirability, and basic demographic information.

The questionnaire was originally created in English, translated into Ukrainian, and then translated back into English by independent experts, and finally pretested with four Ukrainian government officials. The finalized survey was distributed on-site to two separate samples of public administrators participating in continuing education programs at the Ukrainian Academy of Public Service located in the capital, Kyiv (Kiev). We distributed 500 surveys in October 2005 and received a usable sample of 341 responses (68% response rate). Our respondents averaged 40 min for completing the survey. Their anonymity was explicitly assured, and the instrument did not ask for identifying information. The authors’ presence during the data collection phase ensured that the surveys were completed by the eligible participants.

2.1.1. The distinction between SFN and IDN

We used the list of 31 networking behaviors obtained from our inductive fieldwork in the survey administered to this first sample, preceded by the root question: “How often do you engage in the following activities to meet people who have been helpful in your career development?” We asked respondents to use a Likert scale ranging from 1 (very infrequently) to 5 (very frequently). We conducted an exploratory factor analysis (EFA) using a principal axis factoring with oblique rotation to identify specific types of networking behaviors on the 341 responses obtained in the October 2005 sample.

Following Kaiser (1960), we identified two factors with eigenvalues above 1.0 (11.65 and 2.34). Factor 1 explained 78% of the variance; factor 2 explained 16% of the variance. Then we reran the EFA with a two-factor solution using oblique rotation and identified 18 items with loadings of 0.6 or higher on the respective factors. The first factor had 12 items describing IDN behaviors, such as “volunteered for a high visibility assignment at work” and “invited people to dinner.” The second factor had six items describing the networking behaviors an individual conducts through participation in structured foci, such as “joined an international club (e.g., Rotary, Lions)” and “joined a professional association.” Table 1 lists the original 31 items, along with their factor loading scores.

Following the EFA on the first sample, we used data from a second sample to conduct a confirmatory factor analysis (CFA) to compare the fit of a two-factor model to the fit of a one-factor model. We distributed 150 questionnaires in March 2006 using the same 31 items and received a second sample of 118 usable responses (79% response rate).

The fit statistics for the two-factor model using LISREL 9.1 on the second sample were: chi square = 118.61, 112 df, p = 0.31 (p > 0.05), RMSEA = 0.022, BIC = 1776.34, CFI = 0.99 and SRMR = 0.06. The fit statistics for the one-factor model were: chi square = 143.37, 106 df, p = 0.009 (p < 0.01), RMSEA = 0.055, BIC = 1829.74, CFI = 0.99 and SRMR = 0.08. Hu and Bentler (1999) suggest that SRMR has to be below 0.08 to show evidence of good model fit, which is what we achieve with the two-factor solution. The greater than 10 difference in BIC further illustrates that the two-factor model fits best (p < 0.01) (Raftery, 1995). These results from this independent second sample suggest that the two-factor solution is superior to a one-factor solution, providing evidence that we are measuring two distinct networking behavioral tendencies.

In summary, the results of the exploratory and confirmatory factor analysis allowed us to suggest a narrower definition of foci, SFN, around which people meet others and build their networks. It also allowed us to elaborate a non-foci model of networking, which involves no mediating group roles.

2.2. Quantitative theory testing

Below we describe the measures used to test our theory.

2.2.1. Promotion speed

Our ultimate dependent variable of interest is how quickly an individual progresses up the public administration hierarchy. Because our survey was anonymous, we could not access archival data showing career progress. Hence we relied on the respondents’ accounts of promotion dates. They were likely to recall these easily because Ukrainian civil servants must keep personal career journals, much like curricula vitae, detailing the years in which they were promoted, and they submitted these journals to the educational institution immediately prior to attending the seminar and completing the survey.

Promotion speed was measured by (a) observing the rank of the respondent at the time of survey completion, and (b) measuring the respondent’s total number of years of professional experience. To compute this variable, we used the following formula:

\[
\text{Career progression} = \ln \left( \frac{15 - \text{respondent rank}^2}{\text{respondent total working experience}} \right)
\] (1)

We used total working experience in this variable because employees can enter the public administration system above the lowest rank of 15 if they have external working experience. When officials enter public administration after working as managers in the private sector, they are assigned ranks based on their professional credentials. Thus, our use of total working experience allows us to compare the promotion speed of bureaucrats who spent their entire lives working in the civil service against those who accumulated experience outside the civil service before joining at a higher rank (in addition, we controlled for this and found no effect on results). Individuals joining the civil service at the beginning of their professional career would have been ranked 15 (the lowest rank). Consequently we could subtract the rank of all of the respondents at the time of completing the survey from 15 and divide this difference by the total working experience (accumulated both inside
and outside the civil service) to reflect how quickly people moved up in rank throughout their professional careers.7

Our respondents also indicated that moving up the government hierarchy is much more difficult at the higher levels because fewer positions are available and more people are competing for them. Thus, it is much easier for someone to move from rank 15 to 10 than from 10 to 5. To adjust for the increasing marginal difficulties that respondents faced moving to the higher civil service ranks, we squared the numerator in our formula. Finally, we took the natural log of the resulting values to make the distribution more normal.

### 2.2.2. Range

Our respondents were presented with a list of the 28 ministries and asked to identify people that they knew in each. The Range measure is a count of the number of ministries that individuals can access through social ties outside their home ministries. For example, if the respondent’s social ties connected to 10 different ministries, then the Range variable would be 10. Lin and colleagues (Lin, 1999; Lin and Dumin, 1986; Lai et al., 1998) also use a similar measure to capture the diversity of social networks.

### 2.2.3. SFN and IDN behavior measures

We averaged the 12 items that loaded onto the first factor to form our IDN variable and averaged the six items from the second factor to form our SFN variable. The resulting scales had high internal consistency with Cronbach’s alpha coefficients of 0.93 for IDN and 0.88 for SFN.7

#### 2.2.4. Psychological propensity to network

We examined the individuals’ psychological propensity to engage in various types of social relationships, which might affect whether they would choose to initiate ties through SFN or through IDN approaches. We included a general propensity for being socially outgoing, extraversion, as well as a general propensity for valuing caring, warm relationships, agreeableness. We used the IPIP instrument (Goldberg, 1999), found on www.ipip.org, and obtained the following reliability for each factor: $\alpha = 0.70$ for extraversion and $\alpha = 0.70$ for agreeableness. We also examined Machiavellianism—a personality trait that is specifically oriented toward being more calculating about the people with whom one associates (Christie and Geis, 1970; Robinson et al., 1991). We

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7 Note that the scales did not necessarily distinguish between networking in workplace foci versus foci outside the workplace. Feld’s (1981) theory argues that it is the increasing amount of resources needed to maintain multiple foci membership that affects the individual’s network diversity, without regard to the location of the foci, and we have followed this logic. Thus, even if an individual meets others in a structured focus outside the workplace, the diversity of the network in the workplace can be affected (see also Boxman et al., 1991). For example, an individual who joins an online networking group is obligated to devote time and attention to the group. Online profiles must be maintained, friend requests must be handled, profiles must be continually updated, referrals must be made and requested, and participants are often pressured to join other online networking groups to which their contacts belong (e.g., membership in Facebook often leads to joining LinkedIn and Twitter). As the online network grows, demands grow as well, all drawing time and attention from establishing ties outside the group, including individuals from different organizational units.
captured the civil servants’ Machiavellianism by using the 20-item Mach IV Likert-type instrument originally developed by Christie and Geis (1970). Reliability for this scale was acceptable: \( \alpha = 0.67 \) (Nunnally, 1970).

2.3. Controls

We controlled for the remaining Big Five personality factors (intelect, emotional stability, and conscientiousness) because some studies have linked other factors to networks (e.g., Klein et al., 2004) and to entrepreneurial behaviors (e.g., Zhao and Seibert, 2006; Zhao et al., 2010). The reliabilities for these factors were as follows: \( \alpha = 0.71 \) for intellect, \( \alpha = 0.77 \) for emotional stability, and \( \alpha = 0.71 \) for conscientiousness.

2.3.1. Knowledge and competence

We controlled for knowledge and competence, which could affect future promotion, by including two variables: education, which suggested formal training levels, and government experience, which suggested practical knowledge and competence. Education was coded 1 for university graduates and 0 otherwise, and Government Experience was the years worked in the Ukrainian civil service.

2.3.2. Status access

While our concept of network range builds on the strand of networks-as-resources theory that views individuals’ ability to access others in heterogeneous groups as a resource in itself (Campbell et al., 1986; Burt, 1983), an alternative but related theory—social resources theory—views individuals’ ability to reach others with high status, wealth, and power in their organization as the main source of resources (Lin, 1982, 1989). From this perspective, the higher the status of an individual’s friends, the more social resources the individual has, and thus the more likely the individual is to be promoted early. To control for this alternative explanation, we asked respondents how many friends they had in the 7 major pay scales, which is public information associated with the status of the person’s occupation in the Ukrainian civil service. We multiplied the number of friends that the respondents had in each pay scale with a higher weight for a higher pay scale and a lower weight for a lower pay scale. Each friend occupying a position in the highest pay scale (1) was given a weight of 7; a friend on pay scale 2 was given a weight of 6, and so on, down to a friend on the lowest pay scale (7), who was given a weight of 1. We summed these weights into a single Status Access score.

2.3.3. Demographic control variables

We also controlled for Age (in years) and Gender (male = 1, female = 0), which might affect promotion. Because our theoretical arguments on the potential costs of networking are predicated to some extent on having fixed quantities of time and attention that can be devoted to networking, we also included control variables that captured important work-family variables that might limit networking and socializing. Respondents indicated their Marital Status (single = 1, married = 0), a count of the number of children in their family (Children), and whether they had to care for seriously sick relatives (Sick Relatives = 1 if yes, zero if no). These variables were included because of their potential to slow career progression irrespective of range.

2.3.4. Social desirability screen

To control for respondents’ attempts to anticipate the survey’s purpose and provide what they considered acceptable answers, we embedded a 10-item short version of the Marlowe–Crowne social desirability scale, the M-C2 (10) (Strahan and Gerbasi, 1972) within the IPIP personality instrument. We excluded the 14 respondents...
Table 3
3 SLS regression analyses. *

<table>
<thead>
<tr>
<th>DV: Range</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured foci networking (SFN) (H1)</td>
<td>7.60*** (1.68)</td>
<td>6.85*** (2.04)</td>
<td>5.02*** (1.84)</td>
<td></td>
</tr>
<tr>
<td>Structured foci networking squared (H1)</td>
<td>-2.92 (1.24)</td>
<td>-0.50 (1.40)</td>
<td>-2.26 (1.22)</td>
<td></td>
</tr>
<tr>
<td>Individually driven networking (IDN) (H2)</td>
<td>11.18*** (1.72)</td>
<td>5.14*** (1.42)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>8.68*** (0.32)</td>
<td>10.58*** (0.89)</td>
<td>8.92*** (1.04)</td>
<td>10.14*** (0.88)</td>
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<table>
<thead>
<tr>
<th>DV: Individually driven networking</th>
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<tbody>
<tr>
<td>Extroversion</td>
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<tr>
<td>Machiavellianism (H5)</td>
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<tr>
<td>Agreeableness</td>
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<tr>
<td>Conscientiousness</td>
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<tr>
<td>Stability</td>
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<td>Intellect</td>
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<th>DV: Structured foci networking</th>
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<tbody>
<tr>
<td>Agreeableness (H4)</td>
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<tr>
<td>Machiavellianism (H5)</td>
</tr>
<tr>
<td>Extroversion</td>
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<tr>
<td>Conscientiousness</td>
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<tr>
<td>Stability</td>
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<tr>
<td>Intellect</td>
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<td>Constant</td>
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<table>
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<tr>
<th>DV: Career speed (log)</th>
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<tbody>
<tr>
<td>Range</td>
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<tr>
<td>Gender</td>
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<tr>
<td>Age</td>
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<tr>
<td>Government experience</td>
</tr>
<tr>
<td>Government experience squared</td>
</tr>
<tr>
<td>Higher education</td>
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<tr>
<td>Marital status</td>
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<tr>
<td>Number of children</td>
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<tr>
<td>Status</td>
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<tr>
<td>Constant</td>
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</tbody>
</table>

* N = 341, standard errors in brackets.
All tests in this table are two-tailed, coefficient of SFN squared is significant at p < 0.05 at one-tailed test.
1 p < 0.1
2 p < 0.05
3 p < 0.01

who scored more than two standard deviations below or above the mean on this scale.

3. Analysis and results

We used the first sample (N = 341) to identify the two dimensions of networking behaviors (SFN and IDN) and then used the second sample (N = 118) to confirm the robustness of the two-factor solution, so we report our regression and correlation analysis using data from the first sample only. Table 2 contains descriptive statistics and correlation coefficients using the data from the first sample. Range correlates with Promotion Speed at r = 0.28; Individually Driven Networking is correlated with Structured Foci Networking at r = 0.50. Note that in this table, IDN and SFN are centered on their means. Centering of SFN was important to reduce the correlation with the quadratic term, whereas IDN was centered to make the comparison of coefficients with SFN easier in the regression model. We calculated variance inflation factor (VIF) statistics for all models reported below, and none exceeded 10.

A simple test of our hypotheses would involve the following OLS regression:

\[ \text{Career speed} = \phi \text{Range} + \text{Controls} + \epsilon_i \]  
(2)

\[ \text{Range} = \delta \text{Networking behaviors} + \text{Controls} + \epsilon_i \]  
(3)

Such estimation, however, suffers from two notable limitations. First, it prevents us from controlling for the endogeneity that could exist between individuals’ enduring propensity to network and their networking behaviors (i.e., some individuals could engage in more networking and achieve faster promotions because they are more Machiavellian than their peers) as well as controlling for endogeneity between networking behaviors and network range (i.e., networking behaviors determine both range and promotion speed). Consequently, OLS estimates might be inconsistent. Second, because two analyses are performed on the same data, error terms in both equations will be correlated, and their separate OLS analyses will yield inefficient estimates.

To address these issues, we estimated the following system of simultaneous equations:

\[ \text{Networking behaviors}_i = \alpha \text{Psychological characteristics}_i + \epsilon_i \]  
(4)

\[ \text{Range}_i = \delta \text{Networking behaviors}_i + \epsilon_i \]  
(5)

\[ \text{Career speed}_i = \phi \text{Range}_i + \text{Controls}_i + \epsilon_i \]  
(6)

where the speed of career progression of individuals (i) is affected by their range, which, in turn, is affected by their IDN or SFN behavioral tendencies, which are finally determined by their psychological characteristics. To estimate this system of equations we used a three-stage least squares (3SLS) regression technique (Kennedy, 1998), which explicitly controls for endogeneity and accounts for the correlations between error terms in the three equations.

We used the STATA reg3 command to estimate the system of equations (4)–(6), and the results of our 3SLS analysis are in Table 3. We first built Model 1 by entering all the variables in Eq. (6) and psychological control variables in Eq. (4) while estimating Eq. (5).
using only the constant term. In Model 2, we add the linear and squared term of SFN to Eq. (5). In Model 3, we add a linear term for IDN to Eq. (5). In Model 4, we enter the theoretical psychological variables in Eq. (4). Since Model 4 is fully specified, we interpret it below.

Results in Model 4 provide support for our hypotheses. Greater Range had a positive effect on the respondents’ Promotion Speed, suggesting that formal boundary spanning was correlated with job advancement and promotion ($b = 0.06$, $p < 0.05$). The linear term for SFN is positive and significant ($b = 5.02$, $p < 0.001$) whereas a quadratic term for SFN is negative and significant ($b = -2.26$, $p < 0.1^3$), indicating the existence of a negative curvilinear relationship between SFN and Range. This supports Hypothesis 1. IDN is positively related to Range ($b = 5.14$, $p < 0.001$), as predicted by Hypothesis 2. Thus, the more individuals engaged in IDN, the greater their Range. Hypothesis 3 predicted that extroverted individuals would engage in individually driven networking more than introverts. The coefficient of Extroversion on IDN was positive and significant ($b = 0.02$, $p < 0.01$), suggesting support for the hypothesis. Hypothesis 4 predicted that individuals scoring high on agreeableness would engage in structure foci networking to a greater extent than individuals with low agreeableness. This hypothesis was not supported, since the coefficient of Agreeableness did not have an impact on SFN ($b = -0.00$, $p > 0.1$). Finally, we expected Machiavellian individuals to engage more in both structured foci and individually driven networking. Hypothesis 5 postulating these relationships was supported as Machiavellianism was positively and significantly related to both SFN ($b = 0.01$, $p < 0.01$) and IDN ($b = 0.01$, $p < 0.05$).

3.1. Results plot

Fig. 1 illustrates the effects of SFN on range, using the coefficients for SFN and SFN Squared from Model 4 of the 3SLS estimation. This figure shows that individuals obtain maximum range if they engage in moderate levels of structured foci networking. Since the relationship between individually driven networking and range is strictly positive, the widest range is achieved when an individual engages in maximum individually driven networking and average structured foci networking.

3.2. Effects of size

We also checked for the potential impact of individuals’ network size on our results. Network size was correlated with Range at 0.69. The size variable was not significant in the career speed models, either as a control variable or as a replacement for Range. This is consistent with the networks-as-resources perspective, suggesting that network diversity, and not network size, is the critical feature driving access to resources necessary for promotion.

4. Discussion and conclusion

Researcher’s increasing interest in linking social networks and outcomes in organizations over the past two decades has been nothing short of explosive (cf., Borgatti and Foster, 2003). The vast majority of this research has focused either (a) on arguing for the existence of various structures or structural positions such as network range (e.g., Campbell et al., 1985), group closure (Coleman, 1988), constraint (Burt, 1992), or small worlds (Kilduff et al., 2008); or (b) on linking those structures and structural positions with outcomes of organizational interest including promotions (Brass, 1984), salaries (Burt, 1997), satisfaction (Seibert et al., 2001), and extra-role performance (Bowler and Brass, 2006). As the field matures, however, pressure is increasing to understand how individuals acquire these structural positions (Borgatti et al., 2009). Although some researchers have looked to personality measures as the main antecedents to structural positions (e.g., Klein et al., 2004; Mehra et al., 2001), we believe that research should focus on a more direct explanation: the antecedents and consequences of more immediate networking behavioral tendencies that people use to meet others.

Feld’s (1981, 1982) theory of social organization has proved a useful starting point because it predicts how the context surrounding the formation of an individual’s relationships affects the individual’s network diversity. Indeed, our results show that structured foci networking (SFN)—a tendency for networking through groups or clubs that actively bring people together on a recurring basis to engage in organized joint activities for the explicit purpose of meeting others—is a double-edged sword. At low levels structured foci networking increases an individual’s network range, but as this tendency becomes more intensive, the relationship turns negative. The original formulation of the theory of social organization is also incomplete because it restrictively zeroes in on foci networking as the principal behavior and fails to explain how individuals network to overcome foci’s constraints and build ties with broad range. We elaborate Feld’s theory using inductive fieldwork and identify another networking approach, individually driven networking (IDN), which involves meeting people in settings not specifically organized for recurring network building. Our results indicate that IDN enhances range. We also show that extraversion and Machiavellianism are related to the individually driven networking tendencies, and that Machiavellianism is also related to structured foci networking.

Elaborating social organization theory by narrowing the definition of foci, isolating two specific networking behaviors, examining their psychological foundations, linking these networking behaviors to range and promotion speed, all represent our study’s important contributions to the literature on social networks as resources in organizations (e.g., Burt, 1983; Ibarra, 1995; Seibert et al., 2001). We illuminate some underlying processes through which individuals attain their positions within social structures. Understanding these processes, as well as their psychological determinants, is important because conclusions about networking effectiveness could be incomplete or even misleading if we fail to recognize that different types of networking have associated costs and are done by individuals with different psychological profiles. Such incomplete descriptions might, for example, emphasize the importance of engaging in SFN to maximize range without considering the possible costs and constraints, as well as the psychological capabilities of people to engage in this behavior.

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This is the equivalent of $p < 0.05$ for a one tailed test.

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Fig. 1. Impact of structured foci networking on range (this graph is computed at mean ± 2 standard deviations of SFN).
Our inductive fieldwork has also helped generate the beginnings of a career network-building scale specifically intended to be generalizable across many cultures and which we hope will encourage future research on the antecedents of networks. Although a full-scale development study will ultimately be needed, our preliminary work is another contribution to the literature on social networks.

We believe that the two main network-building behavioral tendencies we found will be generalizable beyond the Ukrainian context. While the specific structured foci are likely to be somewhat different across cultural contexts, individuals in every culture join formal groups and meet people through them. For example, while tennis clubs are popular settings for meeting people in the Ukraine, country clubs are popular in the United States. By not asking about specific structured foci, but instead the extent to which individuals are engaging in networking behaviors within types of foci, our work should be generalizable. Regardless of the specific structured foci or the manner in which individuals personally network in each culture, the constraints of formal group membership or the non-constraints of IDN are the core of our theorizing and our findings, and this is what we expect to generalize across cultures. The fact that well-established and culturally generalizable personality factors such as extraversion and Machiavellianism are related to these two networking approaches in theoretically consistent relationships is also suggestive of potential cross-cultural generalizability.

A number of explicit assumptions underlie our theorizing. Following previous network researchers (Burt, 1992, 2002; Feld, 1981; Gargiulo and Benassi, 2000; Bala and Goyal, 2000), we assume that individuals are subject to resource constraints, including time, attention, and affect, that force them to make tradeoffs on initiation, maintenance, and opportunity costs when they engage in network building. If resource constraints did not exist, individuals could maximize both SFN and IDN to maximize their range and promotion speed, without regard to the opportunity and maintenance costs of SFN. However, the introduction of time, attention, and resource constraints on an individual, combined with structured foci's constraints, create the negative curvilinear effect that we hypothesized and found.

We also assumed that while individuals can and do meet others through both structured and individually driven approaches, their behavioral tendencies will affect the likelihood that they will initiate relationships through one approach rather than the other. Some individuals tend to meet others and initiate relationships by engaging in more structured foci activities such as clubs or professional associations. Others tend to initiate relationships more informally, such as on planes or at parties. Although some of these relationships occur in an individual's organization and others outside it, we assume that these networking behavioral tendencies are generalizable across situations. An individual who tends to meet people in structured group settings outside work is more likely to meet people in structured foci within the organization and someone who tends to meet others more independently is likely to act similarly in the workplace. Our study also assumes empirically that memberships in structured foci, regardless of whether or not they are work-based, will affect outcomes in the work setting. This assumption is based on previous empirical research by Boorman et al. (1991), who found that membership in groups outside the workplace affects career outcomes. We might also expect that SFN within the organization would more strongly affect outcomes in the workplace than SFN outside.

4.1. Limitations and future research directions

Our study has a number of limitations that both qualify our ability to make strong claims and present future research opportunities. The study was not longitudinal, a deficiency that also plagued another highly cited article on social networks and career outcomes (Seibert et al., 2001). We relied on the respondents to recall how they met people who were important to their career outcomes and to report when they were promoted, similar to Seibert et al. Although our research design helped mitigate the possibility of retrospective biases by priming the subjects ahead of time to think about these relationships and having them use their résumés and career journals to help them recall promotion dates, we would have preferred to use archival data if they had been available.

In using the networks-as-resources perspective, we focused exclusively on how networking behaviors might be associated with individuals' network structures (i.e., their range) and promotion speed, without regard to the nature or content of the underlying tie. This leaves a number of important questions. Would friendship ties crossing unit boundaries within the organization be as closely associated with promotion speed as more instrumental ties such as advice ties? Would the two different networking approaches be more related to range in one type of tie than the other? For example, structured foci networking might encourage individuals to form expressive ties that could create greater obligations to focus; whereas individual networking might encourage formation of instrumental ties (e.g., Umphress et al., 2003). While we lacked the data to test these questions, they remain of interest for future research.

More research is also needed examining the dark side of range. Boundary spanners are likely to pay a price for having contacts scattered around a large organization; it could prevent them from obtaining consistent emotional support or building close-knit groups of trusted confidants who could give them performance feedback (cf. Podolny and Baron, 1997). Without these elements, individuals with excessive network range could suffer from stress, anxiety, and perhaps lower levels of job satisfaction. Thus, we recognize that fast promotions are not the only measure of career success and encourage future research to understand both socio-emotional and task-related outcomes other than promotions.

Organizational settings vary with respect to how rapidly members can obtain promotions as a result of the range in their networks (cf., Podolny and Baron, 1997). In large private or public bureaucratic organizations, whose overall effectiveness depends on coordination among different units but which suffer from the compartmentalization of knowledge and resources within these units, individuals who have broad network range should be most likely to be promoted because they fill an organizational need for integration across units. This is particularly true of public bureaucracies, which, by nature emphasize the type of unit specialization that creates compartmentalization and ultimately create a premium for those who span units. In contrast, smaller organizations or organizations without a high degree of knowledge compartmentalization will not require as much integration. Thus, we expect a stronger relationship between network range and promotion speed as the size and unit compartmentalization of organizations increase. Moreover, the sheer size of the Ukrainian state bureaucracy, which comprised 227,000 civil servants around the time of our study, might have accounted for the possibility that civil servants engaging in foci networking outside of the workplace (e.g., attending international clubs) can still meet colleagues who work in the different functional units, which might not be the case for smaller organizations. Hence, future research is needed to determine whether this is the case.

4.2. Conclusion

In conclusion, while social network research continues to elucidate the power of having the "right" connections to amplify human capital into valuable career outcomes, we should now turn greater focus to micro questions about the behaviors that fashion networks and elevate certain individuals to positions of network importance.